IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Theodore F. Emerson et al.	§ §	Confirmation No.:	1914
	§	Group Art Unit:	2628
Serial No.: 10/611,403	§		
	§	Examiner:	Nguyen, Hua H.
Filed: July 1, 2003	§ §		
For: OPERATING SYSTEM INDEPENDENT METHOD AND APPARATUS FOR GRAPHICAL REMOTE ACCESS	§ § §	Atty. Docket:	NUHP:0168-1/FLE/PET 200304331-2

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July 28, 2008	**/Jeffery R. Peterson/**
Date	Jeffery R. Peterson

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 41.31 AND 41.37

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on May 20, 2008, and received by the Patent Office on May 27, 2008.

The Commissioner is authorized to charge the requisite fee of $510.00, and any additional fees which may be required to advance prosecution of the present application, to Deposit Account No. 08-2025 Order No.200304331-2/FLE [NUHP:0168-1].

1. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, L.P., the Assignee of the above-referenced application by virtue of the Assignment recorded at reel 014177, frame 0428, and dated December 2, 2003. Accordingly, Hewlett-Packard

Development Company, L.P., will be directly affected by the Board's decision in the pending appeal.

2. **RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal.

3. **STATUS OF CLAIMS**

Claims 1-8, 10-17, 19-33, and 35-38 are currently pending, are currently under final rejection and, thus, are the subject of this Appeal. Claims 9, 18, and 34 were previously cancelled and are no longer presented for consideration.

4. **STATUS OF AMENDMENTS**

As the instant claims have not been amended subsequent to the Final Office Action mailed January 28, 2008, there are no outstanding amendments to be considered by the Board.

5. **SUMMARY OF CLAIMED SUBJECT MATTER**

The present invention relates generally to a method and apparatus for remotely accessing, interacting, and monitoring a computer system independent of the operating system and, more particularly, to remotely displaying graphics–mode display data of the accessed computer system. Specification, page 1, lines 9-12.

The Application contains six independent claims, namely, claims 1, 13, 22, 25, 37, and 38, all of which are the subject of this Appeal. The subject matter of these claims is summarized below.

With regard to the aspect of the invention set forth in independent claim 1, discussions of the recited features of claim 1 can be found at least in the below cited

locations of the specification and drawings. By way of example, a method for transmitting video graphics data is described that includes dividing a screen into a number of blocks (e.g., 200), the blocks having contents. *See, e.g.,* specification, page 10, lines 20-25; Figs. 5. The method also includes periodically reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks. *Id.* at page 19, lines 3-12; Figs. 10A-C and 11A. Additionally, the method includes computing a unique value for a first block based on the contents and comparing the unique value for the first block to a previously computed unique value corresponding to the first block. *Id.* at page 10, line 28 through page 11, line 8; page 20, lines 11-18; Figs. 7A and 10A. Further, the method includes transmitting the contents of the first block if the unique value for the first block is different from the previously computed unique value corresponding to the first block. *Id* at page 16, line 16 through page 17, line 5; page 21, line 19 through page 22, line 3; Figs. 7C and 10C.

With regard to the aspect of the invention set forth in independent claim 13, discussions of the recited features of claim 13 can be found at least in the below cited locations of the specification and drawings. By way of example, a method of transmitting video graphics data is described that includes dividing a screen into a number of blocks (e.g., 200). *See, e.g.,* specification at page 10, lines 20-25; Fig. 5. The method includes reading a first block and at least one subsequent block wherein all the blocks are read over a number of passes and wherein each pass reads a different fraction of all the blocks. *Id.* at page 19, lines 3-12; Fig. 11A. Also, the method includes comparing the first block to a subsequent block and developing a repeat command based on how many subsequent blocks equal the first block. *Id.* at page 15, line 24 through page 16, line 19; page 20, line 21 though page 21, line 18; Figs. 7B and 9. Additionally, the method includes transmitting the first block and the repeat command. *Id* at page 16, line 16 through page 17, line 5; page 21, line 19 through page 22, line 3; Figs. 7C and 10C.

With regard to the aspect of the invention set forth in independent claim 22, discussions of the recited features of claim 22 can be found at least in the below cited locations of the specification and drawings. By way of example, a method of transmitting video graphics data is described that includes dividing a screen into a number of blocks (e.g., 200). *See, e.g.,* specification at page 10, lines 20-25; Fig. 5. The method includes reading a first block of the screen and compressing the first block. *Id.* at page 19, line 3 though page 22, line 3; Figs. 10A-C. The method also includes reading a second block of the screen, wherein all the blocks are read over a number of passes and each pass reads a different fraction of all the blocks. *Id.* at page 19, lines 5-12; Figs. 10A and 11A. Also, the method includes comparing the first block to the second block. *Id.* at page 18, lines 23-26; Fig. 9. Additionally, the method includes compressing the second block with the first block if the first and second blocks are not equal and transmitting the compressed blocks. *Id.* at page 21, lines 5-18; Fig. 10B.

With regard to the aspect of the invention set forth in independent claim 25, discussions of the recited features of claim 25 can be found at least in the below cited locations of the specification and drawings. By way of example, a computer system (e.g., 2) for communicating with a remote console (e.g., 6) is describe that includes a video graphics controller (e.g., 114a) having a frame buffer (e.g., 118a), a communication device (e.g., 112a), and a processor (e.g., 100) coupled to the video graphics controller (e.g., 114a) and the communications device (e.g., 112a). *See, e.g.,* specification, page 5, line 18, through page 9, line 9; Figs. 1-3. The processor (e.g., 100) is configured to divide the frame buffer (e.g., 118a) into a number of blocks (e.g., 200) and periodically read the frame buffer (e.g., 118a) and determine whether any of the blocks (e.g., 200) have changed since a previous reading. *Id.* at page 10, line 20 through page 11, line 8; Fig. 5. The processor (e.g., 100) reads all of the blocks over a number of passes and each pass reads a different fraction of all the blocks. *Id.* at page 19, lines 3-12; Fig. 11A. The processor (e.g., 100) is also configured to transmit changed blocks to the remote console (e.g., 6) via the communications device (e.g., 112a). *Id.* at page 21, line 19 through page 22, line 3.

With regard to the aspect of the invention set forth in independent claim 37, discussions of the recited features of claim 37 can be found at least in the below cited locations of the specification and drawings. By way of example, a computer system (e.g., 2) for communicating with a remote console (e.g., 6) is described that includes a video graphics controller (e.g., 114a) having a frame buffer (e.g., 118a), a monitor (e.g., 4) connectable to the video graphics controller (e.g., 114a), a communication device (e.g., 112a), and a processor (e.g., 100) coupled to the video graphics controller (e.g., 114a) and the communications device (e.g., 112a). *See, e.g.,* specification, page 5, line 18 through page 9, line 9; Figs. 1-3. The processor (e.g., 100) is configured to divide the frame buffer (e.g., 118a) into a number of blocks (e.g., 200) and periodically read the frame buffer (e.g., 118a) and determine whether any of the blocks (e.g., 200) have changed since a previous reading. *Id.* at page 10, lines 20 through page 11, line 8, Fig. 5. Each of the blocks (e.g., 200) are read over a number of passes and each pass reads a different fraction of all the blocks. *Id.* at page 19, line 3-12; Fig. 11A. The processor (e.g., 100) is also configured to transmit changed blocks to the remote console (e.g., 6) via the communications device (e.g., 112a). *Id.* at page 21, line 19 through page 22, line 3.

With regard to the aspect of the invention set forth in independent claim 38, discussions of the recited features of claim 38 can be found at least in the below cited locations of the specification and drawings. By way of example, an apparatus (e.g., 50) for updating video graphics data for a remote console (e.g., 2) is disclosed that includes means for dividing a frame buffer (e.g., 118a) into a series of blocks (e.g., 200). *See, e.g.,* specification, page 5, line 18 through page 11, line 8; Figs. 1-3 and 5. Additionally, the apparatus (e.g., 50) includes means for reading one of the blocks, wherein each of the blocks are read over a number of passes and wherein each pass reads a different fraction of all the blocks. *Id.* at page 19, lines 3-12; Fig. 11A. Also, the apparatus (e.g., 50) includes means for computing a hash code for the block and means for comparing the hash code to a previously computed hash code for the block. *Id.* at page 10, line 28

through page 11, line 3; Fig. 5. Further, the apparatus (e.g., 50) includes means for transmitting the block if the hash codes are not equal. *Id.* at page 21, line 19 through page 22, line 3.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

First Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's first ground of rejection in which the Examiner rejected claims 1-11, 13-20, 22-33, and 35-38 under 35 U.S.C. 103(a) as being unpatentable over Szamrej (U.S. Patent No. 5,990,852) in view of Callaway (U.S. Patent No. 5,255,361).

Second Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's second ground of rejection in which the Examiner rejected claims 12 and 21 as being unpatentable over Szamrej in view of Callaway in further view of Fujimoto (U.S. Patent No. 5,473,348).

7. ARGUMENT

As discussed in detail below, the Examiner has improperly rejected the pending claims. Further, the Examiner has misapplied long-standing and binding legal precedents and principles in rejecting the claims under Sections 102 and 103. Accordingly, Appellants respectfully request full and favorable consideration by the Board, as Appellants strongly believe that claims 1-8, 10-17, 19-33 and 35-38 are currently in condition for allowance.

A. Ground of Rejection No. 1:

The Examiner rejected claims 1-11, 13-20, and 22-38 under 35 U.S.C. § 103(a) as being unpatentable over the Szamrej and Callaway. Specifically, with respect to claim 1, the Examiner stated, in pertinent part:

> Szamrej fails to explicitly teach reading the contents of each one of the blocks <u>over a number of passes wherein each pass reads a different fraction of all the blocks</u>. However, the way of reading each block in the array as taught by Szamrej can be modified by reading each row in the block to find change as disclosed in Callaway. As shown in Fig. 3, Callaway teaches a method of updating a display unit of a remote computer system by monitoring the changes in the display buffers row by row (col. 4, lines 18-57). Callaway further teaches screen analysis begins by comparing each row of the host desk top buffer 44 with the same row in the remote image buffer 46. For each row having changed data, column numbers associated with the leftmost and rightmost changed bytes are recorded in a change table (col. 5, lines 24-35).
>
> Since Szamrej teaches reading the contents block by block to find the changes and transmitting the changed blocks, Callaway teaches reading the block row by row (a fraction of a block) to find changes and transmitting only the changed data, it would have been obvious to one skilled in the art to utilize the method as taught by Callaway in combination with the method as taught by Szamrej in order to quickly detect the changes in the host display and transmit to the remote computer (col. 5, lines 3-23).

Final Office Action, pages 2-3. Claims 13, 22, 25, 37 and 38 were all rejected under similar rationale. Appellants respectfully traverse this rejection.

1. <u>**Judicial precedent has clearly established a legal standard for a *prima facie* obviousness rejection.**</u>

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, it is not enough to show that all the elements exist in the prior art since a claimed invention composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). It is important to identify

a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Specifically, there must be some articulated reasoning with a rational underpinning to support a conclusion of obviousness; a conclusory statement will not suffice. *In re Kahn,* 441 F.3d 977, 988 (Fed. Cir. 2006). Indeed, the factual inquiry determining whether to combine references must be thorough and searching, and it must be based on *objective evidence of record. In re Lee,* 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002).

Moreover, the pending claims must be given an interpretation that is reasonable and consistent with the *specification. See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969) (emphasis added); *see also In re Morris,* 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); *see also* M.P.E.P. §§ 608.01(o) and 2111. Indeed, the specification is "the primary basis for construing the claims." *See Phillips v. AWH Corp.*, No. 03-1269, -1286, at 13-16 (Fed. Cir. July 12, 2005) (*en banc*). One should rely *heavily* on the written description for guidance as to the meaning of the claims. *See id.* Further, interpretation of the claims must also be consistent with the interpretation that *one of ordinary skill in the art* would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); M.P.E.P. § 2111. "The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation." *See Collegenet, Inc. v. ApplyYourself, Inc.*, 418 F.3d 1225, 75 U.S.P.Q.2d 1733, 1738 (Fed. Cir. 2005) (quoting *Phillips v. AWH Corp.*, 75 U.S.P.Q.2d 1321, 1326). The Federal Circuit has made clear that derivation of a claim term must be based on "usage in the ordinary and accustomed meaning of the words amongst artisans of ordinary skill in the relevant art." *See id.*

2. **<u>The Examiner's rejection of _claims 1, 13, 25, 37 and 38 is improper because the rejection fails to establish a *prima facie* case of obviousness</u>**

In order to quickly discover changes in the data displayed on a screen, the instant application discloses a method wherein "instead of reading every pixel block 200 sequentially, the screen is sampled for changing data based on a pattern or count. For example, every second, third, fourth (as indicated by 'X'), etc., pixel block 200 can be read as illustrated in Figure 11A. The sampling rotates every pass of the screen so that every pixel block 200 is eventually read. For example, if sampling every fourth pixel block, it would take four passes of the screen to read every pixel block of the screen." Specification, page 19, lines 6-12.

As such, independent claim 1 recites, *inter alia*, "periodically reading the contents of each one of the blocks *over a number of passes, wherein each pass reads a different fraction of all the blocks*." (Emphasis added). Independent claim 13 recites, *inter alia*, "reading a first block and at least one subsequent block wherein all the blocks are read *over a number of passes and wherein each pass reads a different fraction of all the blocks*." (Emphasis added). Independent claim 25 recites, *inter alia*, "wherein the processor reads all of the blocks *over a number of passes and wherein each pass reads a different fraction of all of the blocks*." (Emphasis added). Independent claims 37 and 38 each recite, *inter alia*, "wherein each of the blocks are *read over a number of passes and wherein each pass reads a different fraction of all of the blocks*." (Emphasis added).

In sharp contrast, Szamrej and Callaway, taken alone or in hypothetical combination, do not disclose such features. The Examiner admitted that Szamrej fails to explicitly teach reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all of the blocks. *See, e.g.,* Final Office Action, page 2. Appellants agree with the Examiner in this regard. However, the Appellants disagree with the Examiner's assertion that Callaway overcomes this admitted

deficiency of Szamrej. In particular, Callaway simply teaches monitoring changes in display buffers row by row. Callaway, col. 4, lines 18-57. Indeed, Callaway states:

> In the present embodiment of the invention, prior to analyzing the contents of the display buffer 42, the quick scan/ analyzer 50 facilitates the copying of the contents of the display buffer 42 into the host desk top buffer 44. This procedure essentially takes a snapshot of the contents of the display buffer 42 at a given point in time and provides static data for comparison purposes.
>
> [...]
>
> Screen analysis begins by comparing each row of the host desktop buffer 44 with the same row in the remote image buffer 46. For each row having changed data, column numbers associated with the leftmost and rightmost changed bytes are recorded in a change table (not shown).

Id. at col. 4, lines 18-25; col. 5, line 24-26. As such, Callaway simply teaches reading all of the pixels row-by-row and then comparing each row with the same row stored at a remote image buffer to determine changed data. *See id.* Callaway, however, does not disclose reading all the blocks over a number of passes, as all pixels and/or blocks are read in each pass. Moreover, Callaway cannot possibly disclose wherein each pass reads a different portion of all the blocks, as all the pixels are read in each pass to "essentially take[s] a snapshot of the contents of the display buffer 42." *See id.* at col. 4, lines 22-25. There is simply no reasonable interpretation of Callaway that can be taken as reading on the recitations admittedly deficient from Szamrej. Accordingly, for at least this reason, Appellants respectfully request reversal of the rejection of claims 1, 13, 25, 37 and 38.

Moreover, in an Advisory Action, the Examiner stated:

> Specifically, since Szamrej teaches each block of the plurality of blocks divided contains a number of rows and columns, Callaway teaches periodically reading the contents of each of the blocks over the number of passes, each pass reads a different fraction of all the blocks (i.e.

> reading row by row of the blocks, each row contains the contents of a fractions of all the blocks in the horizontal row.

Advisory Action, mailed April 17, 2008. This statement illustrates the fundamental misinterpretation and application of Callaway by the Examiner. In particular, as discussed above, Callaway simply does not teach, disclose or suggest periodically reading each of the blocks over a number of passes, much less wherein each pass reads a different fraction of all the blocks. Further, even assuming *arguendo* that Callaway could reasonably be read to disclose reading each of the blocks over a number of passes, as asserted by the Examiner, the combination of Callaway and Szamrej would not meet the elements of the independent claims. Specifically, the reading of each pixel, row-by-row, only results in reading fractions of blocks in a particular row, as noted by the Examiner. Additionally, such a hypothetical combination would essentially vitiate the teachings of Szamrej with respect to dividing the screen into blocks, as the pixels are simply being read pixel-by-pixel, row-by-row, and the blocks become irrelevant. Accordingly, not only does Callaway fail to overcome the admitted deficiencies of Szamrej, but the hypothetical combination of the two references, as set forth by the Examiner, is irrational, as it would then vitiate the teachings of Szamrej reference with respect to other elements of the claims. Accordingly, for at least this additional reason, Appellants respectfully assert that the Section 103 rejection of claims 1, 13, 25, 37 and 38 is in error and respectfully request reversal and allowance of claims 1, 13, 25, 37 and 38, as well as all claims depending therefrom.

Accordingly, Appellants respectfully assert that the Szamrej reference and the Callaway reference, taken alone or in hypothetical combination, fail to disclose all the features of the independent claims 1, 13, 25, 37, and 38. As such, the Examiner has failed to present a *prima facie* case for obviousness. Therefore, Appellants respectfully request reversal of the Section 103 rejection of independent claims 1, 13, 25, 37, and 38. Additionally, the Appellants respectfully request allowance of claims 1, 13, 25, 37 and 38, as well as all claims depending thereon.

2. **<u>The Examiner's rejection of claim 22 is improper because the rejection fails to establish a *prima facie* case of obviousness</u>**

With respect to claim 22, the Examiner stated:

> As per claim 22, Szamrej reaches a method of transmitting video graphics data comprising:
>
> dividing a screen into a number of block (screen segmented into a sixteen by sixteen (16 x 16) array of cells or blocks, col. 5, lines 42-45);
>
> reading a first block of the screen (the monitoring thread as shown in Fig. 2A, col. 3, lines 49-65);
>
> compressing the first block (col. 2, lines 61-66);
>
> reading a second block of the screen (col. 2, lines 61-66);
>
> comparing the first block to the second block (Fig. 2A, step 28, see col. 4, lines 24-55);compressing the second block with the first block if the first and second blocks are not equal; and transmitting the compressed blocks (col. 2, lines 25-33, and lines 61-66).
>
> Szamrej fails to explicitly teach reading the contents of each one of the blocks <u>over a number of passes wherein each pass reads a different fraction of all the blocks</u>. However, the way of reading each block in the array as taught by Szamrej can be modified by reading each row in the block to find change as disclosed in Callaway. As shown in Fig. 3, Callaway teaches a method of updating a display unit of a remote computer system by monitoring the changes in the display buffers row by row (col. 4, lines 18-57). Callaway further teaches screen analysis begins by comparing each row of the host desk top buffer 44 with the same row in the remote image buffer 46. For each row having changed data, column numbers associated with the leftmost and rightmost changed bytes are recorded in a change table (col. 5, lines 24-35).
>
> Since Szamrej teaches reading the contents block by block to find the changes and transmitting the changed blocks, Callaway teaches reading the block row by row (a fraction of a block) to find changes and transmitting only the changed data, it would have been obvious to one skilled in the art to utilize the method as taught by Callaway in combination with the method as taught by Szamrej in order

> to quickly detect the changes in the host display and transmit to the remote computer (col. 5, lines 3-23).

Final Office Action, page 7 and 8. Appellants respectfully traverse the rejection.

Independent claim 22 recites, *inter alia*, "wherein all of the *blocks are read over a number of passes and each pass reads a different fraction of all the blocks*; comparing the first block to the second block; *compressing the second block with the first block if the first and second blocks are not equal*." (Emphasis added).

Appellants respectfully assert that the cited references fail to disclose all the elements of claim 22 for at least the reasons set forth above with respect to claims 1, 13, 25, 37 and 38. In particular, in sharp contrast, Szamrej and Callaway, taken alone or in hypothetical combination, do not disclose such features. Specifically, as noted above, the Examiner admitted that Szamrej fails to explicitly teach reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all of the blocks. *See* Final Office Action, page 8. Appellants agree with the Examiner in this regard. However, the Appellants disagree with the Examiner's assertion that Callaway overcomes this admitted deficiency of Szamrej. In particular, as discussed in detail above, Callaway simply teaches monitoring changes in display buffers row by row. Callaway, col. 4, lines 18-57. Indeed, Callaway states:

> In the present embodiment of the invention, prior to analyzing the contents of the display buffer 42, the quick scan/ analyzer 50 facilitates the copying of the contents of the display buffer 42 into the host desk top buffer 44. This procedure essentially takes a snapshot of the contents of the display buffer 42 at a given point in time and provides static data for comparison purposes.
>
> [...]
>
> Screen analysis begins by comparing each row of the host desktop buffer 44 with the same row in the remote image buffer 46. For each row having changed data,

> column numbers associated with the leftmost and rightmost changed bytes are recorded in a change table (not shown).

Id. at col. 4, lines 18-25; col. 5, line 24-26. As such, Callaway simply teaches reading all of the pixels row-by-row and then comparing each row with the same row stored at a remote image buffer to determine changed data. *See id.* Callaway, however, does not disclose wherein all the blocks are read over a number of passes. Moreover, Callaway cannot possibly disclose wherein each pass reads a different fraction of all the blocks. Specifically, *all* the pixels (not a fraction) are read in each pass to "essentially take[s] a snapshot of the contents of the display buffer 42." *See id.* at col. 4, lines 22-25. There is simply no reasonable interpretation of Callaway that can be taken to read on the recitations admittedly deficient from Szamrej. Accordingly, for at least this reason, Appellants respectfully request reversal of the rejection of claim 22.

Furthermore, however, Appellants respectfully assert that Szamrej and Callaway do not disclose, teach or suggest compressing the second block with the first block if the first and second blocks are not equal, as set forth in claim 22. Indeed, the Examiner did not even cite to any portion of any reference as disclosing compressing the second block with the first block if the first and second blocks are not equal. Appellants are, therefore, unaware of any portion of the cited references that discloses anything that can reasonably read on this element and, further, assert that the references do not disclose such features. Accordingly, for at least this additional reason, Appellants respectfully request reversal of the Section 103 rejection of claim 22 and allowance of the same, as well as all claims depending therefrom.

In view of the foregoing, Appellants respectfully assert that the Szamrej reference and the Callaway reference, taken alone or in hypothetical combination, fail to disclose all the features of the independent claim 22 . As such, the Examiner has failed to present a *prima facie* case for obviousness. Therefore, Appellants respectfully request reversal of the Section 103 rejection of independent claim 22. Additionally, the Appellants respectfully request allowance of claim 22, as well as all claims depending thereon.

B. **<u>Ground of Rejection No. 2</u>:**

The Examiner rejected claims 12 and 21 as being obvious over the Szamrej and Callaway references, in further view of Fujimoto. In particular, the Examiner stated:

> As per claim 12, Szamrej teaches the blocks contain color value (col. 1, lines 20-25). The combination Szamrej-Callaway reference fails to teach *condensing the color value into 6-bit red-green-blue color values before computing the unique values*. However, it is well-known in the art at the time the invention was made to convert the color values of pixels into 6-bit RGB as described in Fujimoto col. 7, lines 31-35, the advantage of which is to reduce the amount of data per pixel in order to transmit over a low bandwidth network.
>
> Claim 21 which is similar in scope to claim 12, is thus rejected under the same rationale.

Final Office Action, page 11. Appellants respectfully traverse the rejection.

As stated above, Szamrej and Callaway, taken alone or in combination, fail to disclose all the features of independent claims 1, and 13. Specifically, Szamrej and Callaway do not disclose reading all of the blocks "over a number of passes and *wherein each pass reads a different fraction of the blocks*." (Emphasis added.) Fujimoto does not overcome the deficiencies of Szamrej and Callaway in this respect.

Fujimoto is directed to improving the drawing performance of a coprocessor by determining whether an access target is a system memory or a VRAM. *See* Fujimoto, Abstract. However, Appellants are unaware of, and the Examiner has not cited to any portion of Fujimoto that can reasonably be considered the equivalent of reading all the blocks over number of passes and reading a different fraction of the blocks in each pass, as set forth in the independent claims. As such, Appellants respectfully request reversal of the Section 103 rejection and allowance of claims 12 and 21 based on their respective dependencies from independent claims 1 and 13.

Conclusion

Appellants respectfully submit that all pending claims are in condition for allowance. However, if the Examiner or Board wishes to resolve any other issues by way of a telephone conference, the Examiner or Board is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: July 28, 2008

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8. <u>APPENDIX OF CLAIMS ON APPEAL</u>

<u>Listing of Claims:</u>

1. A method for transmitting video graphics data, comprising:

dividing a screen into a number of blocks, the blocks having contents;

periodically reading the contents of each one of the blocks over a number of passes, wherein each pass reads a different fraction of all the blocks;

computing a unique value for a first block based on the contents;

comparing the unique value for the first block to a previously computed unique value corresponding to the first block; and

transmitting the contents of the first block if the unique value for the first block is different from the previously computed unique value corresponding to the first block.

2. The method of claim 1, further comprising:

storing the unique value for the first block in a table if the unique values are different; and

comparing the unique value of the first block to a unique value corresponding to a preceding block,

wherein the transmitting step transmits the preceding block and a repeat command if the unique value of the first block is equal to the unique value corresponding to the preceding block.

3. The method of claim 1, further comprising:

storing the unique value of the first block in a table if the unique values are different;

comparing the unique value of the first block to a unique value corresponding to a preceding block; and

compressing the contents of the first block if the unique values are not equal,

wherein the transmitting step transmits the preceding block and a compressed first block if the unique value of the first block is not equal to the unique value corresponding to the preceding block.

4. The method of claim 3, wherein the compressing step includes compressing a number of similar bytes using a run length encoding technique.

5. The method of claim 1, further comprising:

periodically reading configuration information of a video graphics controller;

determining if the configuration information has changed; and

transmitting configuration changes if the configuration information has changed.

6. The method of claim 5,

wherein the screen is divided into a number of blocks, including rows and columns, based on the screen resolution, and

wherein the configuration information is read after a row of blocks is completed.

7. The method of claim 1, further comprising:

periodically reading configuration information of a pointing device;

determining if the configuration information has changed; and

transmitting configuration changes if the configuration information has changed.

8. The method of claim 7,

wherein the screen is divided into a number of blocks, including rows and columns, based on the screen resolution, and

wherein the configuration information is read after a row of blocks is completed.

10. The method of claim 1, wherein surrounding blocks are marked for accelerated processing if during one of the passes the unique value for a given block is different from a previously computed unique value corresponding to the given block.

11. The method of claim 10, wherein each pass reads a different fraction of all the blocks and any blocks marked for accelerated processing.

12. The method of claim 1, wherein the blocks contain color values, the method further comprising:

condensing the color values into 6-bit red-green-blue color values before computing the unique values.

13. A method of transmitting video graphics data, comprising:

dividing a screen into a number of blocks;

reading a first block and at least one subsequent block wherein all the blocks are read over a number of passes and wherein each pass reads a different fraction of all the blocks;

comparing the first block to a subsequent block;

developing a repeat command based on how many subsequent blocks equal the first block; and

transmitting the first block and the repeat command.

14. The method of claim 13, comprising:

periodically reading configuration information of a video graphics controller;

determining if the configuration information has changed; and

transmitting configuration changes if the configuration information has changed.

15. The method of claim 14,

wherein the screen is divided into a number of blocks, including rows and columns, based on the screen resolution, and

wherein the configuration information is read after a row of blocks is completed.

16. The method of claim 13, comprising:

periodically reading configuration information of a pointing device;

determining if the configuration information has changed; and

transmitting configuration changes if the configuration information has changed.

17. The method of claim 16,

wherein the screen is divided into a number of blocks, including rows and columns, based on the screen resolution, and wherein the configuration information is read after a row of blocks is completed.

19. The method of claim 13, wherein surrounding blocks are marked for accelerated processing if during one of the passes the unique value for a given block is different from a previously computed unique value corresponding to the given block.

20. The method of claim 19, wherein each pass reads a different fraction of all the blocks and any blocks marked for accelerated processing.

21. The method of claim 12, wherein the blocks contain color values, the method further comprising:

condensing the color values into 6-bit red-green-blue color values, before computing the unique values.

22. A method of transmitting video graphics data, comprising;

dividing a screen into a number of blocks;

reading a first block of the screen;

compressing the first block;

reading a second block of the screen, wherein all the blocks are read over a number of passes and each pass reads a different fraction of all the blocks;

comparing the first block to the second block;

compressing the second block with the first block if the first and second blocks are not equal; and

transmitting the compressed blocks.

23. The method of claim 22, wherein the compressing step includes compressing a number of similar bytes using a run length encoding technique.

24. The method of claim 22,

wherein surrounding blocks are marked for accelerated processing if during one of the passes the unique value for a given block is different from a previously computed unique value corresponding to the given block, and

wherein the reading step includes reading a different fraction of all the blocks and any blocks marked for accelerated processing.

25. A computer system for communicating with a remote console, comprising:

a video graphics controller having a frame buffer;

a communication device; and

a processor coupled to the video graphics controller and the communications device, the processor configured to:

divide the frame buffer into a number of blocks;

periodically read the frame buffer and determine whether any of the blocks have changed since a previous reading, wherein the processor reads all of the blocks over a number of passes and wherein each pass reads a different fraction of all the blocks; and

transmit changed blocks to the remote console via the communications device.

26. The computer system of claim 23, wherein a hash code is calculated and stored for each block when the block is first read, and wherein subsequent changes are

determined for a given block by calculating a new hash code and comparing the new hash code to the stored hash code.

27. The computer system of claim 26, wherein if subsequently positioned changed blocks have hash codes equal to a previously positioned block, the processor is configured to develop a repeat command to indicate how many times the previously positioned block is repeated prior to transmission.

28. The computer system of claim 26, wherein if subsequently positioned changed blocks have hash codes unequal to a previously positioned block, the processor is configured to compress the subsequently positioned changed block prior to transmission.

29. The computer system of claim 28, wherein the processor is configured to compress similar bytes within a block using a run length encoding technique.

30. The computer system of claim 25, wherein the processor is further configured to:

periodically read configuration information of the video graphics controller;

determine if the configuration information has changed; and

transmit configuration changes if the configuration information has changed.

31. The computer system of claim 30,

wherein the screen is divided into a number of blocks, including rows and columns, based on the screen resolution, and

wherein the processor reads the configuration information after a row of blocks is completed.

32. The computer system of claim 25, wherein the processor is further configured to:

periodically read configuration information of a pointing device;

determine if the configuration information has changed; and

transmit configuration changes if the configuration information has changed.

33. The computer system of claim 32,

wherein the screen is divided into a number of blocks, including rows and columns, based on the screen resolution, and

wherein the processor reads the configuration information after a row of blocks is completed.

35. The computer system of claim 25, wherein the processor marks surrounding blocks for accelerated processing if during one of the passes the unique value for a given block is different from a previously computed unique value corresponding to the given block.

36. The computer system of claim 35, wherein each pass reads a different fraction of all the blocks and any blocks marked for accelerated processing.

37. A computer system for communicating with a remote console, comprising:

a video graphics controller having a frame buffer;

a monitor connectable to the video graphics controller;

a communication device; and

a processor coupled to the video graphics controller and the communications device, the processor configured to:

divide the frame buffer into a number of blocks;

periodically read the frame buffer and determine whether any of the blocks have changed since a previous reading, wherein each of the blocks are read over a number of passes and wherein each pass reads a different fraction of all the blocks; and

transmit changed blocks to the remote console via the communications device.

38. An apparatus for updating video graphics data for a remote console, comprising:

means for dividing a frame buffer into a series of blocks;

means for reading one of the blocks, wherein each of the blocks are read over a number of passes and wherein each pass reads a different fraction of all the blocks;

means for computing a hash code for the block;

means for comparing the hash code to a previously computed hash code for the block ; and

means for transmitting the block if the hash codes are not equal.

9. EVIDENCE APPENDIX

None.

10. RELATED PROCEEDINGS APPENDIX

None.